GOVERNMENT OF INDIA
WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION
LOK SABHA

UNSTARRED QUESTION NO:1874
ANSWERED ON:28.07.2016
Shortage of Water
Sanjar Shri Alok

Will the Minister of WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION be pleased to state:

(a) whether India is likely to face huge shortage of water by the year 2050;

(b) if so, the details thereof;

(c) whether the Government has formulated any policy to deal with the above situation;

(d) if so, the details thereof; and

(e) whether the Government has formulated any scheme for rainwater harvesting in the country, and if so, the details thereof?

Answer

THE MINISTER OF STATE FOR WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION
(DR. SANJEEV KUMAR BALYAN)

(a) & (b) The average annual water availability in the country has been assessed by Central Water Commission as 1869 billion cubic meters (BCM). However, due to topographic, hydrological and other constrains, the utilizable water has been estimated to be about 1123 BCM, comprising of 690 BCM of surface water and 433 BCM of replenishable ground water.

The National Commission for Integrated Water Resources Development (NCIWRD) had in its Report in 1999, estimated, that the total water requirement for different purposes for the year 2025 and 2050 would be about 843 BCM and 1180 BCM respectively.

In view of growing population, the per capita water availability in India is getting reduced year after year as given below;

Year Population
(in millions) Per Capita water availability
(in m3/year)
1951 361 5177
2001 1027 1820
2011 1210 1545
2025 (projected) 1394 1341
2050 (projected) 1640 1140

According to Falkenmark Water Stress Indicator, a per-capita water availability of less than 1700 cubic meters is considered as water stressed condition, whereas per-capita water availability below 1000 cubic meters is considered as a water scarcity condition.

(c) & (d) The National Water Policy, 2012 formulated by this Ministry has made several recommendations for enhancing water available for use. Some of the recommendations of the Policy in this regard are as under:

i. The availability of water resources and its use by various sectors in various basin and States in the country need to be assessed scientifically and reviewed at periodic intervals, say, every five years. The trends in water availability due to various factors including climate change must be assessed and accounted for during water resources planning.

ii. The availability of water is limited but the demand of water is increasing rapidly due to growing population, rapid urbanization, rapid industrialization and economic development. Therefore, availability of water for utilization needs to be augmented to meet increasing demands of water. Direct use of rainfall, desalination and avoidance of inadvertent evapo-transpiration are the new additional strategies for augmenting utilizable water resources.

iii. There is a need to map the aquifers to know the quantum and quality of ground water resources (replenishable as well as non-replenishable) in the country. This process should be fully participatory involving local communities. This may be periodically updated.

iv. Declining ground water levels in over-exploited areas need to be arrested by introducing improved technologies of water use, incentivizing efficient water use and encouraging community based management of aquifers. In addition, where necessary, artificial recharging projects should be undertaken so that extraction is less than the recharge. This would allow the aquifers to provide base flows to the surface system, and maintain ecology.

v. Inter-basin transfers are not merely for increasing production but also for meeting basic human need and achieving equity and social justice. Inter-basin transfers of water should be considered on the basis of merits of each case after evaluating the environmental, economic and social impacts of such transfers.

vi. Integrated Watershed development activities with groundwater perspectives need to be taken in a comprehensive manner to increase soil moisture, reduce sediment yield and increase overall land and water productivity. To the extent possible, existing programs like MGNREGA may be used by farmers to harvest rain water using farm ponds and other soil and water conservation measures.

(e) State Governments undertake several measures for augmenting, conserving and utilizing the water resources which inter-alia include conservation of water resources in reservoirs and traditional water bodies, rain water harvesting and artificial recharge of ground water. This Ministry provides technical and financial assistance to the State Governments in this regard through various schemes and programmes viz. Accelerated Irrigation Benefits Programme, Scheme for Repair, Renovation & Restoration of Water-bodies etc.

Central Ground Water Board, under this Ministry has prepared a conceptual document entitled "Master Plan for Artificial Recharge to Ground Water in India" during the year 2013 envisaging construction of 1.11 crore Rainwater Harvesting and Artificial Recharge structures in the country to harness 85 BCM (Billion Cubic Meters) of water. The augmented ground water resources will enhance the availability of water for drinking, domestic, industrial and irrigation purposes. The Master Plan has been circulated to all State Governments for implementation.

Recycle and reuse of water, after treatment to specified standards as well as rainwater harvesting and artificial recharge are being incentivized through various initiatives, programmes/ schemes of the Government.

This Ministry has circulated a Model Bill to all the States/UTs to enable them to enact suitable ground water legislation for its regulation and development which includes provision of rain water harvesting. 15 States/UTs have adopted and implemented the ground water legislation on the lines of Model Bill. 31 States/UTs have made rain water harvesting mandatory by enacting laws or by formulating rules & regulations or by including provisions in Building bye-laws or through suitable Government Orders.

The water conservation and water harvesting structures to augment ground water constitute a special focus area for MGNREGA; about 2/3rd of the expenditure is directly related to construction of water harvesting structures.

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